Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Telephone Number Portability	)	CC Docket No. 95-116

U S WEST REPLY TO OPPOSITIONS

U S WEST, Inc. submits this reply to the oppositions filed in response to its petition for reconsideration and clarification.[1] Although 19 oppositions were filed in this proceeding,[2] only five of them addressed the serious issues U S WEST raised in its reconsideration petition.

I. The Commission Should Readjust Its Implementation Schedule To Better Address Significant Outstanding Network Reliability Concerns

U S WEST demonstrated in its petition that the introduction of permanent number portability "involve[s] the largest and most complex change ever made to the public switched telecommunications network."[3] Among other things, number portability requires the deployment of technologies that still do not exist, will change radically the way local and toll calls are routed through the public network, and will require carriers to

---

[1] *See* U S WEST Petition for Reconsideration and Clarification, CC Docket No. 95-116 (Aug. 26, 1996).

[2] Oppositions were filed by: ALLTEL Telephone Services Corp. (ALLTEL); Association for Local Telecommunications Services (ALTS); AT&T Corp. (AT&T); Bell Atlantic Telephone Companies (Bell Atlantic); BellSouth Corporation and BellSouth Telecommunications, Inc. (BellSouth); Cellular Telecommunications Industry Association (CTIA); Cincinnati Bell Telephone Company (CBT); GTE Service Corporation (GTE); IntelCom Group, Inc. (IntelCom); MCI Telecommunications Corporation and MCI Metro (MCI); NEXTLINK Communications (NEXTLINK); NYNEX Telephone Companies (NYNEX); Pacific Telesis Group (Pacific); RAM Mobile Data USA Limited Partnership (RAM); Rural Telecommunications Group (RTG); Sprint Corporation (Sprint); Telecommunications Resellers Association (TRA); Time Warner Communications Holdings (TWComm); and United States Telephone Association (USTA).

[3] U S WEST Petition at 3.

modify virtually every one of their ordering, capacity provisioning, maintenance, repair, and billing systems. Notwithstanding "the magnitude of the undertaking,"[4] the Commission has directed the industry to begin using, in less than one year, number portability for "live" traffic in seven of this nation's most populous urban areas.

The Commission, restating its commitment to network reliability, directed some members of the industry to conduct in Chicago next summer a "first office application" (FOA) of the new technology. As U S WEST pointed out in its petition, this Chicago FOA is an important first step, but it is only one step. In the end, the test period the Commission established is still insufficient to address the substantial network reliability issues associated with using the new and untested number portability technology. For this reason, it was and remains U S WEST's position that the current deployment schedule "adds an unnecessary degree of risk to the continued reliability of the" network.[5]

In particular, U S WEST demonstrated that the official test results of the Chicago FOA would not be published until September 30, 1997, yet carriers were to begin using number portability for "live" traffic the next day, with the conversion of their most populous MSA completed only three months later, by December 31, 1997.[6] This schedule precludes carriers not participating in the Chicago FOA from having an opportunity to

[4] Sprint Opp. at 11.

[5] U S WEST Petition at 2,

[6] The commencement of the Chicago inter-network FOA may be in jeopardy. At an industry meeting two weeks ago, Ameritech questioned its ability to meet the planned July 1, 1997 start date because of vendor delays. Ameritech expected to have a better idea about the viability of the July 1 start date by early December.

review the test results, much less making modifications the results would recommend, before the new technology must be ready to support live traffic.

U S WEST further documented that the Chicago FOA will address only generic issues with respect to the equipment and software used in the networks of the trial participants. This test will not address equipment and software of other vendors, nor will it address critical carrier-specific operational issues. Consequently, the current schedule allows no time for carriers to test the new technology within their own networks and to test the changes to the dozens of supporting systems. Carrier-specific testing is especially important for incumbent LECs because, among other things, loads on their signaling networks will be increased to unprecedented levels.[7]

To avoid jeopardizing the continued reliability of the public network, U S WEST recommended that the Commission extend by three months the Phase I (100 top MSA/15-month) implementation schedule so carriers in each region would have an opportunity to conduct their own "first region application." Under this proposal (and assuming the Chicago FOA is still completed by August 31, 1997), carriers in each region would conduct "first region application" tests and begin implementation during 4Q97, completion of the seven MSAs scheduled for 4Q97 would be extended to 1Q98, completion of the 16 MSAs scheduled for conversion in 1Q98 would be extended to 2Q98, and

[7] *See, e.g.,* U S WEST Petition at 8 ("Preliminary calculations indicate that the CCS traffic for Minneapolis will increase by about 280% over current CCS loads once the LRN portability feature is activated in full. . . . An increase in CCS loads of this magnitude is unprecedented.").

so forth. This revised schedule would result in the Phase I conversion being completed by the end of 1Q99 (rather than 4Q98).

U S WEST's recommendation is opposed by three carriers: IntelCom, MCI, and NEXTLINK.[8] Although these carriers assert that the additional testing U S WEST has proposed is "unnecessary,"[9] none of them offers any explanation for its assertion. In fact, none of these opposing carriers challenges the accuracy of any of the detailed facts U S WEST submitted in its petition (and summarized above). Nor does any of these carriers present any valid "technical" reason in response to U S WEST's showing, as demonstrated by the attached declaration of U S WEST Communication's Vice-President of Capacity Provisioning.

The one legal argument advanced by IntelCom, MCI, and NEXTLINK also lacks merit. Those carriers assert that concerns over network reliability are "premature" and should be raised at a later time in a waiver request.[10] In effect, these carriers want the Commission to delay addressing network reliability issues until the eve of the cut-over of number portability to "live" traffic. The Commission should reject such a dangerous strategy.

---

[8] *See* IntelCom Opp. at 6-7; MCI Opp. at 17-18; and NEXTLINK Opp. at 3-4. MCI's assertions that U S WEST's petition "presents [no] new information" and constitutes an attempt "to delay [portability] as long as possible" (Opp. at 16) are completely inaccurate, as confirmed by MCI's failure to present any evidence in support of its claims.

[9] NEXTLINK Opp. at 3.

[10] *See* IntelCom Opp. at 6-7; MCI Opp. at 17-18; and NEXTLINK Opp. at 3-4.

The current deployment schedule adds an unnecessary degree of risk to the continued reliability of the networks of all LECs. The mandated "first office application" by selected industry members will not obviate the need for other carriers to conduct their own network-specific tests before using number portability with "live" traffic. In addition, three months (4Q97) is simply not enough time to install, test, and begin using for the first time number portability in any MSA — much less the most populous MSAs.[11] For these reasons, the Commission should address the network reliability issues identified by U S WEST now, on an industry-wide basis, non on an ad hoc basis on the brink of implementation.

II. The Commission Should Clarify that Implementation of Database Portability May Be Deferred Until It Resolves the Critical Cost Recovery Issues

In its petition, U S WEST also asked the Commission to confirm that carriers need not begin implementing number portability until a cost recovery plan is in place.[12] Such a plan is especially important where, as here, the technology at issue is unproved and the deployment costs are so large. U S WEST's incumbent LEC has advised the Commission that the costs it will incur to comply with just Phase I of its number portability order (top 10 MSAs only) will exceed $365 million.[13]

---

[11] U S WEST's concern is principally with the fact that the current schedule requires use of number portability during 4Q97. At this time, U S WEST believes that its concerns can likely be adequately addressed by maintaining the top 100 MSA/15-month schedule, but extending the entire schedule by three months so carriers have time to conduct a "first region application" during 4Q97.

[12] *See* U S WEST Petition at 15-17.

[13] *See* Letter from Robert Jackson, U S WEST, to William S. Caton, Acting FCC Secretary (Oct. 10, 1996).

U S WEST's recommendation is opposed by three entities — ALTS, Sprint, and NEXTLINK — that basically make the same argument: "[t]he Commission has over a year to resolve cost recovery issues before the first markets are scheduled to have local number portability capability, and there would appear to be no reason why cost recovery decisions cannot be made within that time."[14]

It is true that, under the current schedule, carriers need not begin using number portability for another year. But carriers must begin building that system and incurring substantial costs immediately so as to meet that operational deadline. U S WEST's incumbent LEC estimates that it must spend approximately $300 million over the next year to meet the Commission's conversion requirement. The opposing carriers nowhere explain where U S WEST's incumbent LEC is to find this $300 million in cash to fund this regulatory mandate — an expenditure which will not result in its realizing new revenues.

The ALTS/Sprint/NEXTLINK argument is also inconsistent with the Commission's own precedent. This summer, the Commission required providers of commercial mobile radio service (CMRS) to deploy a new E911 service capabilities that, like number

---

[14] Sprint Opp. at 12-13. *See also* NEXTLINK Opp. at 2 ¶ 4 and 6 ¶ 12 (The further NPRM proceeding "will more than satisfy the need for establishing such mechanisms in a timely fashion."); ALTS Opp. at 6 n.7. ALTS further contends that U S WEST's position "ignores prior history" because U S WEST "was subject to an equal access requirement long before the Equal Access and Network Reconfiguration access element was ever approved." Id. There are at least two problems with this ALTS argument. First, the FCC's approval of an EANR access element was never critical because, under the Plan of Reorganization, AT&T guaranteed that the BOCs would recover all their EANR costs. *See* United States v. Western Electric, 569 F. Supp. 1057, 1123 (D.D.C. 1983)("AT&T will reimburse the [BOCs] in the amount of any remaining deficit."). Second, even ignoring the AT&T guarantee, the BOCs had reasonable assurance they would recover their EANR costs at the time because they faced no competition and recovery was virtually assured with rate of return regulation. The monopoly environment no longer exists and BOCs are no longer assured that expenditures they make will be recovered — especially in connection with a project like number portability which does not promise to generate new revenues. It is, therefore, essential that the FCC develop a cost recovery plan for number portability.

portability, are untested and will be costly to implement.[15] The Commission was careful to point out that this new regulatory obligation is "contingent upon the adoption of a cost recovery mechanism."[16] The Commission held:

> In establishing this deployment schedule, we also conclude . . . that the requirements imposed upon covered carriers by our actions in establishing the schedule shall apply only if a carrier receives a request for E911 service . . . and a cost recovery mechanism is in place.[17]

Indeed, so important was cost recovery as a pre-condition to any deployment obligation that the Commission incorporated the condition in its rules.[18]

So too here, the Commission should recognize that carriers have no obligation to begin implementing number portability until an adequate cost recovery plan is "in place." Competition in the local exchange underscores the need for all carriers to have a fair opportunity to recover all their costs in complying with a new federal mandate. If a carrier, and especially an incumbent LEC whose pricing flexibility is severely constrained, is denied such an opportunity, it will be unable to make up the lost revenue by seeking in-

---

[15] *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Report and Order, CC Docket No. 94-102, FCC 96-264 (July 26, 1996). The only material difference between wireless E911 capabilities and number portability is that, with the former, the decisions as to whether and when to deploy the new capabilities are made by local 911 officials rather than the federal government. It was, therefore, entirely appropriate in the wireless E911 context to impose on local and state officials the obligation to develop an adequate cost recovery plan.

[16] CMRS E911 Order at 47 ¶ 89.

[17] Id. at 33-34 ¶ 63 (emphasis added). *See also* id. at 9 ¶ 11 (We also provide that the E911 (Phase I and Phase II) requirements . . . shall apply only if . . . a mechanism for the recovery of costs relating to the provision of such services is in place."); id. at Appendix B p.6 ("[T]he burden on [carriers] will be offset by the requirement that a cost recovery mechanism will be in place before their E911 obligations need to be implemented.").

[18] New Rule 20.18(f) provides: "The requirements set forth in paragraphs (d) and (e) of this section shall be applicable only if the administrator of the designated Public Service Answering Point has requested the services required under those paragraphs and is capable of receiving and utilizing the data elements associated with the service, and a mechanism for recovering the costs of the service is in place."

creased rates on other aspects of service. Even if regulators would approve such a rate structure, the increasingly vigorous competition faced by an incumbent LEC would prevent it from sustaining the rate differential in the marketplace. Consumers would be free to choose other telecommunications providers for the services over which regulators intended the incumbent LEC to recover their number portability costs. Thus, "[w]here competition prevails, a firm cannot compensate itself for losses on one venture by raising prices on other lines of business; if it tried to do so, competitors could profitably capture the business."[19]

It is, therefore, essential that the Commission reaffirm that the requirements imposed by its number portability order "shall apply only if . . . a cost recovery mechanism is in place."[20] The Commission is also legally obligated to do so. As U S WEST demonstrated in response to the Further Notice of Proposed Rulemaking in this docket,[21] because number portability is a federal mandate, the Commission itself is obligated to establish a federal mechanism that affords carriers an opportunity to recover their full implementation costs.[22] And, as noted above, any delay in putting such a mechanism in

---

[19] Associated Gas Distributors v. FERC, 824 F.2d 981, 1034 (D.C. Cir. 1987).

[20] CMRS E911 Order at 47 ¶ 89.

[21] *See* U S WEST Comments, Docket 95-116, at 5-9 (Aug. 16, 1996); U S WEST Reply Comments, at 1-4 (Sept. 16, 1996).

[22] *See, e.g.,* Smith v. Illinois Bell 282 U.S. 133, 148-49 (1930)(state regulators have "no authority to impose intrastate rates, if as such they would be confiscatory, on the theory that the interstate revenue of the company was too small and could be increased to make good the loss."); Hawaiian Telephone v. Hawaii, 827 F.2d 1264, 1275 (9th Cir. 1987), *cert. denied*, 498 U.S. 1218 (1988)(invalidating state separations formula that failed to provide for recovery of all costs assigned to the state's jurisdiction); NARUC v. FCC, 737 F.2d 1095, 1113-14 (D.C. Cir. 1984), *cert. denied*, 469 U.S. 1227 (1985)("Under Smith, a portion of the costs of [local telephone plant] are assigned to the interstate jurisdiction, for recovery under the regulation of the FCC. . . . Local telephone plant costs are real . . . and they must be recovered regardless of how many or how few interstate calls . . . a subscriber makes.").

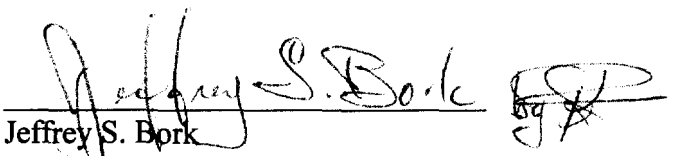
place will significantly jeopardize that opportunity because of the inevitable impact of vigorous competition.

III. Conclusion

For the reasons specified in its August 26, 1996 petition for reconsideration and clarification and those set forth above, the Commission should extend implementation of number portability by three months so all carriers can conduct necessary tests of the new technology during 4Q97. The Commission should also reaffirm that no carrier is obliged to implement number portability until an adequate cost recovery plan is in place.

Respectfully submitted,

U S WEST, Inc.



Jeffrey S. Bork
U S WEST, Inc.
1020 19th Street, N.W.
Washington, D.C. 20036
303-672-2700

Of Counsel: Dan L. Poole

October 10, 1996

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Telephone Number Portability	)	CC Docket No. 95-116

Declaration of Harvey A. Plummer

1. My name is Harvey A. Plummer. I submit this response in support of the petition for reconsideration and clarification filed by U S WEST, Inc. on August 26, 1996 and in response to the oppositions to that petition submitted by IntelCom Group, Inc. ("IntelCom"); MCI Telecommunications Corporation and MCI Metro ("MCI"), and NEXTLINK Communications ("NEXTLINK").

Background

2. I have worked in telephone network organizations for 28 years and have significant experience in designing, engineering, and operating new technologies in telecommunications networks. For example, I worked at AT&T for over three years during the early 1980s where I formulated plans for (then) new interconnection arrangements between the Bell Operating Companies ("BOCs"), on the one hand, and cellular, radio common carrier, interexchange, and international record carriers, on the other hand. My responsibilities included development and implementation of Type 2 interconnection for cellular carriers and Feature Groups B and D for interexchange carriers.

3. I have held a wide variety of posts since returning to U S WEST Communications, Inc. ("USWC") shortly before divestiture. In these posts, I have monitored and been involved with many new developments to USWC's

network, including the phased implementation of equal access; the phased implementation of digital switching; the phased implementation of common channel signaling ("CCS" or "SS7") networks; the phased implementation of new local service features like CLASS and calling name; the phased introduction of ISDN; the phased implementation of AIN; the phased implementation of voice mail; and the phased implementation of 800 data base access service. Before my current job, I was responsible for all network operations in the states of Arizona and New Mexico, where I managed over 3,000 technicians.

4. At present, I am the Vice-President of Capacity Provisioning for USWC, where I am responsible for managing over 3,000 employees, an annual capital budget in excess of $2 billion, and an annual expense budget of over $300 million. My capacity provisioning organization is responsible for the planning, design, and engineering of telephone switching systems and local distribution and inter-office facilities for USWC's 14-state network. It is, therefore, my organization which is responsible for designing and engineering USWC's network to support, among other things, number portability in accordance with the directives of the Federal Communications Commission ("FCC"). My organization will also work with USWC's local network operations organization in testing first the components and then the entire network once number portability capabilities have been installed in the network.

Summary of Declaration

5. I am familiar with the FCC's requirements for number portability. It is my opinion that number portability represents the largest and the most

complex change ever made to the public switched telecommunications network ("PSTN"). Number portability requires the purchase now, and deployment and use within one year, of new hardware and software that does not now exist, including new end office, tandem, and operators services switch generics; the LRN feature; number portability SCP software; local SMS software; and regional SMS software. Number portability, when implemented, will also change the way carriers route calls through the PSTN. In addition, the successful deployment of number portability will require most carriers, including USWC, to modify virtually all of their supporting ordering, provisioning, maintenance, repair, and billing systems.

6. I am also familiar with the FCC's deployment schedule for number portability. As I explain in more detail below, I believe that the current schedule does not give vendors and their customer carriers sufficient time to conduct necessary testing. As a result, it is my opinion that the current schedule adds an unnecessary degree of risk to the continued reliability of the PSTN generally and USWC's network in particular. While it may be possible for vendors to complete their software development in the time allotted, the current schedule does not contain sufficient time to perform necessary integration testing among vendors and carriers.

7. Integration testing is especially important because of the FCC's compressed schedule for number portability. Historically, new services feature development takes 3-5 years. For example, work on equal access software was commenced in 1979, but the first office was not converted until 1984. Because

the FCC has directed that carriers begin using number portability in less than one year, switch vendors must necessarily develop their software based on their own interpretation of the requirements for number portability. The potential for incompatibilities is real, and reinforces the need to perform integration testing to avoid substantial and widespread risks to continued network reliability.

8. Because of my concern over network reliability, I believe that the FCC should give carriers in each region time to conduct a "first region application" of number portability before they must use the new technology in the conduct of live traffic. These "first region applications" would most appropriately be conducted shortly following the successful conclusion of the "first office application" scheduled to be conducted in Chicago during July and August 1997. A minimum of three months would be required to conduct a "first region application" so each carrier can conduct both intra-network and inter-network tests.

9. If completion of the first MSA, now scheduled for 4Q97, were extended to 1Q98 as U S WEST proposes, I would hope to use the 4Q97 both to conduct necessary testing and to begin implementation. This revised schedule would be me more time (*e.g.*, four-to-six months) to phase in implementation of number portability in USWC's most populous MSA.

10. I am not alone in expressing concerns over network reliability. Issue 29 before the Colorado/Washington Number Portability Workshop states that "[t]here are insufficient requirements in the reliability and performance ar-

eas. If such requirements were developed, how do we ensure they are met? How does a provider engineer to meet these requirements with respect to default routing? How do these requirements play into the big picture of network reliability?" The Colorado/Washington Portability Workshop, which includes such carriers as AT&T, MCI, Teleport, Electric Lightwave, has assigned this network reliability issue its highest priority.

Response to NEXTLINK

11. I have reviewed the three-page Declaration of Christine Walker appended to NEXTLINK Communications' opposition to U S WEST's reconsideration petition. There, Ms. Walker states that "U S WEST would not benefit from a delay of three to six months in implementing local number portability." Declaration at 2 ¶ 6.

12. Although U S WEST's reconsideration petition explains in considerable detail why additional time to conduct additional tests would be warranted, Ms. Walker does not respond to any of U S WEST's factual points in her Declaration. In addition, she does not reveal her qualifications to make this judgment, other than to state that she is a "Manager, Interconnection and CLEC Services of NEXTLINK Communications." Declaration at 1 ¶ 1.

13. I cannot agree with Ms. Walker's assertion that USWC (and its customers) would not benefit by being given time to conduct a "first region application" of number portability. It is my opinion that USWC could reduce substantially the risk of network failure if it is given some time to test the new technologies and modifications made to its network and systems before the

new capability is used to support number portability with "live" traffic in its most populous MSA.

14. It bears noting the carriers may view such subjects as capacity engineering and integrity testing very differently depending on the size or location of their respective network. For example, a carrier with only one switch serving several thousand access lines will likely view such subjects from a very different perspective from carrier like USWC which has 54 switches (excluding remotes) serving approximately 1.4 million access lines in the Minneapolis MSA, the first MSA USWC must convert to number portability. Similarly, a carrier like NEXTLINK, which apparently does not have a switch in any of U S WEST's MSAs scheduled for early conversion, may be less concerned about the need to conduct integrity and other tests during 4Q97.

15. Ms. Walker notes correctly that USWC has been very active in industry number portability forums. *See* Declaration at 2 ¶ 4. USWC seeks to learn as much as possible about number portability, and its attendance at industry meetings does much to help it identify outstanding issues which must be addressed for successful implementation. However, identifying issues and being "generally knowledgeable about the impact on its systems" (NEXTLINK Opposition at 3-4 ¶ 7) does not replace the need to test a new system before it is used to support commercial traffic.

16. Ms. Walker is mistaken in asserting that Ordering Billing Forum ("OBF") has "extensively analyzed and discussed . . . inter-carrier operational support system impacts of LNP." The OBF discusses inter-carrier billing is-

sues, not operational support systems. Discussion of network testing and maintenance issues is instead the domain of the Network Operations Forum ("NOF"). I have been advised that the NOF has not yet begun its discussion of the impacts number portability will have on maintenance and testing requirements. USWC intends to bring to the next NOF meeting an issue pertaining to number portability testing.

17. Ms. Walker would give the impression that the Chicago "first office application" renders unnecessary any need for other carriers to conduct their own tests. *See* Declaration at 2 ¶ 4. Ms. Walker does not explain the basis for her opinion. I cannot share Ms. Walker's opinion because, as discussed below, USWC uses different network elements and operational support systems than Ameritech and because, even where the two companies use the same equipment, the scope of the Chicago trial will be significantly narrower than what USWC will need to test before cut-over to live traffic.

18. At the outset, it is my understanding that the Chicago internetwork trial, insofar as it involves carriers other than Ameritech, is currently scheduled to begin in July 1997 — not "the first quarter of 1997" as Ms. Walker represents. *See* Declaration at 2 ¶ 4. However, at the most recent (September 19) meeting of the Operations Committee of the Illinois Number Portability Workshop, an Ameritech representative expressed concern about meeting the scheduled July start date because of vendor delays. While Ameritech has indicated that it should know in December whether it will be above to meet the July 1997 date, developments and trials of this magnitude cannot be predicted

with any accuracy. It is my experience that with complex projects like number portability, optimal plans rarely match actual experience.

19. More fundamentally, the Chicago LRN test plan is limited in scope to a "call through type" test whose purpose primarily is to ensure that (a) ported calls are routed correctly and (b) the new LRN software does not negatively affect existing network feature capabilities (*e.g.,* CLASS, ISDN, E911). It is my understanding that the current version of the Chicago test plan does not include any network integrity tests or any load and volume testing, although I am told that this plan is still being revised and completed. In addition, the Chicago test plan will require modification by individual carriers for specified network architecture needs and requirements. As U S WEST detailed in its reconsideration petition, it is imperative that carriers conduct such tests because number portability will dramatically increase, over such a short period of time, the traffic loads on the existing network, especially on their CCS networks.

20. In addition, because USWC uses many different operational support systems and network elements from Ameritech, USWC must, once its network-related number portability components are installed, test the modified integrated network and support systems environment.. NEXTLINK is, therefore, mistaken when it states that "[i]nformation from the Chicago field test has been and will continue to be available to U S WEST to support ongoing testing and any necessary modifications to existing systems." Opposition at 1-2 ¶ 2.

21. Ms. Walker alternately appears to suggest that USWC need not "await the outcome of the [Chicago] trial before beginning its own tests." There

are several problems with this statement. First, one of the reasons the industry conducts a "first office application" is to discover "bugs" which are basic to a new feature like end office LRN software. This being the case, software vendors are generally reluctant to provide additional early software releases that they must support. Moreover, little is gained by having multiple carriers perform simultaneously the same initial call-through tests on the same early-release software, only to discover the same software faults. Besides, performing initial vendor testing at multiple sites simply exposes unnecessarily multiple sites to the same risks.

22. More fundamentally, it appears unlikely that USWC can commence testing within its own network before September or October 1997. To conduct a test of both its network and its supporting systems, USWC first must have in place most of the many components used in the test. USWC would conduct a "first region application" in the Minneapolis MSA, the first MSA scheduled for conversion to number portability. Below are the key components which must be installed and individually tested before USWC can conduct an overall network and systems test:

Industry SMS	The requirements for an industry SMS, including the regional SMS which will serve Minneapolis, have not been developed. For USWC to begin its own SMS interface testing by September 1, 1997, testing of this regional SMS must be completed by August 31, 1997. The industry target is to install the regional SMS for testing in July 1997, but it is not known at this time whether this date can be met because neither an SMS administrator nor an SMS vendor has been selected.

Switch Replacements and Enhancements	Capacity requirements added by number portability will require USWC to replace at least three 1AESS switches in the Minneapolis MSA. USWC does not yet have a commitment from its new switch vendor when the replacement switches will be installed and available for use. In addition, USWC must upgrade the processors on all 12 of its DMS switches.
New Switch Generics	USWC must install new generics in all 54 host switches which serve the Minneapolis MSA, and none of these generics are currently available. For example, USWC must install 5E11 generics in its 26 5ESS switches. USWC's "first office application" for this 5E11 generic is scheduled for March 28, 1997. Assuming no problems with this FOA, USWC anticipates completing 5E11 generic installation and "soaking" in all 26 5ESS switches by August, 1997. A similar schedule applies to the new generics for the 13 1AESS, the 12 DMS switches, plus the three 1AESS switches which must be replaced.
LRN Software	USWC is currently working with its vendors to get commitment dates concerning when it can acquire LRN software for its 54 host switches in the Minneapolis MSA. It appears that one vendor may be unable to provide any LRN software before July 1997.
Portability Databases	USWC is preparing to announce vendor selection for its number portability SCPs (or "downstream databases"). USWC will begin shortly negotiations with this vendor to schedule an installation date for the Minneapolis databases. USWC's target date for this installation is April 1997, so necessary database, administrative, and network testing can be completed by September 1997.
STPs	USWC is negotiating with its vendors to obtain additional signaling-based capabilities to support both number portability and all current network services. Many new features are either in development or yet to be deployed. Significant numbers of additional instructions

> must be added to each affected STP pair to deploy LRN, and integration and compatibility testing between and among these new features is essential to maintain the integrity of the network.. This work must be completed by April 1997 in the Minneapolis MSA in order to test prior to providing service. Many activities will be proceeding at the same time in order to provide service in all MSAs.

All the work listed above is being done to comply with the FCC's July 2, 1996 number portability order. This new work is in addition to other work (*e.g.*, 2-PIC) USWC had already scheduled for the same network employees during the same period.

23. In summary, USWC's ability to commence necessary integrity and systems testing in September or October 1997 is dependent on many factors, many of which are beyond USWC's control. It is therefore clear that Ms. Walker is mistaken when she claims, without reciting any facts, that USWC can commence its own testing before or during the Chicago "first office application."

24. Ms. Walker further asserts that "U S WEST is in a position now to begin making modifications to its systems where necessary." Declaration at 2 ¶ 5. USWC has, indeed, begun the process of modifying its many support systems to accommodate number portability. However, these system modifications cannot be tested until all the components listed in paragraph 22 above have been installed and individually tested. It bears remembering that USWC needs time not only to test the modifications to its systems but also to fix software faults discovered in the tests.

25. Consider the practical problems my organization now faces. For example, we must enlarge substantially USWC's CCS network in Minneapolis to accommodate all the database dips required by the LRN method of number portability. Without fully understanding the specific design and implementation for each vendor, current call attempt data cannot reliability predict the number of database dips that will be required to support number portability. At present, vendors are only capable of giving my organization theoretical volume estimates (because they do not have a product to provide firmer data). Only actual tests will confirm whether the vendor estimates my organization used in sizing the network are accurate.

26. An undersized network can result in congestion problems and the potential for failure, a situation which generally can be rectified only by ordering more equipment (*e.g.,* processors, links, ports) after the congestion or failure has occurred. The risk of congestion and failure is exacerbated with number portability because there are so many new components to the new system and because the new capability must effectively be deployed on a "flash cut" basis (over a three month period). This deployment scheme is, from a technical perspective, not prudent. USWC, like most carriers, introduces a new capability in phases, generally conducting initial tests in smaller offices. With number portability USWC has been directed to convert all 54 switches in the Minneapolis MSA in only three months.

27. NEXTLINK asserts that "the Commission's schedule provides ample opportunity for LECs such as U S WEST to conduct intra-network testing

and to make required modifications to networks in order to accommodate local number portability." Opposition at 1 ¶ 2. However, if USWC cannot even begin intra-network testing before September or October 1997 and if such testing requires a minimum of three months, USWC cannot possibly complete this testing and complete conversion of its first MSA before December 31, 1997 — at least not without jeopardizing significantly the continued reliability of the network.

Response to MCI

28. Two statements by MCI warrant a brief response. MCI states that "[w]hat works in Chicago will work in the rest of the country, since all carriers use switches from the same few vendors, and have similar network designs." MCI Opposition 17 n.10. This statement must have been written by someone not familiar with network operations, because it is simply not accurate.

29. In the first place, Ameritech uses different network components than USWC. For example, it is my understanding that Ameritech uses different STPs and may use a different number portability SCP than USWC. Equipment made by different vendors often has different capabilities and characteristics (*e.g.*, different equipment performs the same function in a different way).

30. Carriers do, as a general rule, use many of the same switches. However, it is erroneous to conclude that what works in Chicago will immediately work in the rest of the country. Consider USWC's internal experience

with AT&T's 5E10 generic, which occurred after AT&T had already conducted the first national testing of its new 5E10 generic.

31. USWC began its "first office application" of the 5E10 generic on November 17, 1995 in its Glen Prairie central office in Minnesota. The Glen Prairie switch serves about 14,000 lines in a rural/suburban area. Not surprisingly, the test revealed several bugs in the new software which USWC and the vendor were able to correct. These included software faults not discovered in previous testing of 5E10 by other carriers.

32. The next month USWC installed the 5E10 generic in one of its central office switches in Rochester, Minnesota. This switch serves nearly 30,000 lines, it serves customers which have different calling patterns than at the Glen Prairie office, and it is loaded with features not used in the Glen Prairie office. Although USWC was testing the same new software on the same switch type, this test revealed significant problems (*e.g.,* dropped calls) not encountered in the Glen Prairie test.

33. USWC thereafter installed the 5E10 generic in its St. Paul Market street office, a switch which serves both as a local central office and an access tandem. The switch serves several very large customers, and the test revealed new major problems not previously encountered with either the Glen Prairie or the Rochester installation — again, even though USWC was installing the same new software on the same switch type. Overall, it took almost six months to identify and fix most major bugs with the next 5E10 generic.

34. Bugs with new software are to be anticipated, and they will inevitably be encountered with 5E11 and other new switch generics. MCI is, therefore, mistaken in suggesting that what works in Chicago will immediately work in the rest of the country.

35. MCI also asserts that U S WEST's concerns about network reliability are "completely bankrupt." Opposition at 13. U S WEST demonstrated in its petition that number portability will, among other things, result in almost a four-fold increase in its current CCS loads. An increase of this size is unprecedented, and an increase of this size over a three month period only presents unique risks. I cannot, therefore, agree with MCI's statement that network reliability concerns are "bankrupt."

Response to IntelCom's Arguments

36. IntelCom states that USWC has "a full four months" between the scheduled conclusion of the Chicago trial on August 31, 1997 and the scheduled completion of number portability in the Minneapolis MSA on December 31, 1997. IntelCom Opposition at 6. IntelCom therefore concludes that "U S WEST and other carriers will have ample time to review and evaluate the results of the Illinois Workshop field trial. . . . . There is no legitimate reason to give additional delays to carriers who choose to limit, delay, or avoid their involvement in field trials." Id. at 6-7.

37. IntelCom is, of course, correct that the Chicago trial is currently scheduled to conclude on August 31, 1997 and that four months is "ample time to review and evaluate the results" of that trial. However, IntelCom ne-

glects to mention the points raised in U S WEST's petition and above, including:

- The scope of the Chicago trial is limited;
- Carriers need time not simply to "evaluate" the results of this trial, but also time to react to the trial's learnings;
- Notwithstanding the Chicago trial, carriers must still conduct their own integrity, integration, and systems tests;
- Practical considerations preclude USWC from commencing these tests before September or October 1997;
- Experience teaches that initial implementation plans are rarely achieved in complex projects; and
- Three or four months is not, at least in my judgment, adequate time to (a) test an entirely new set of technologies; (b) react to the learnings of the test (be it modifying software or purchasing new equipment); and (c) cut-over a network comprising 54 switches serving approximately 1.4 million access lines.

It is precisely for these reasons that U S WEST recommends that the FCC extend completion of the cut-over of the first MSA to 1Q98 so necessary "first region application" testing can be conducted during 4Q97 and so carriers have additional time to begin implementing number portability in their first MSA.